

## Report Highlights:

- NJDOH is reporting three presumptive positive cases of West Nile virus (WNV) infection in Camden, Bergen, and Middlesex counties.
- There are 43 positive WNV pools in Week 33, for a total of 319 mosquito pools this year. The number of positive pools for week 32 is higher than last year and is above the 5-year average (week 33 tests still in progress). Bergen County has the highest total number of positive pools, followed by Hudson County. The vector index is highest this week in Bergen and Union counties.
- The number of human babesiosis cases continues to rise and has already reached 80% of the 2022 total. The number of anaplasmosis cases is almost to 2022 levels.
- The number of tick-related emergency department visits continues to decline and is below with the 5-year average.
- The number of Lyme disease cases continued to decline and is now lower than this week last year.
- N.J. vector-borne disease data is available online: [https://dashboards.doh.nj.gov/views/public\\_dashboard/Intro](https://dashboards.doh.nj.gov/views/public_dashboard/Intro) and can be accessed on the "Fight the Bite N.J." webpage: <https://www.nj.gov/health/cd/topics/vectorborne.shtml>.

## Vector-borne Disease Case Summary

N.J.A.C.8:57 mandates public health reporting of communicable diseases. 2023 data reflect cases that have been approved by NJDOH and do not include cases under investigation. Due to the time needed for public health investigation, the number of tickborne diseases (with the exception of Lyme disease) may be significantly lower than actual counts and should be interpreted with caution. All 2023 numbers are preliminary and subject to change. "Presumptive positive" cases are pending additional testing. Case counts for 2022 reflect the annual total for that year.

Mosquito-borne diseases			Tickborne Diseases/Conditions		
	2023	2022		2023	2022
Chikungunya	8	2	Alpha-gal syndrome	90	234
Dengue	17	35	Anaplasmosis	120	125
Eastern equine encephalitis	-	-	Babesiosis	233	292
Jamestown Canyon	-	-	<i>Borrelia miyamotoi</i>	2	6
Malaria	39	86	Ehrlichiosis ( <i>chaffeensis</i> , <i>ewingii</i> )	73	115
West Nile	3	20	Lyme disease*	4,896	5,897
Zika	-	-	Powassan	-	2
			Spotted fever group rickettsioses	15	35
			Tularemia	2	1

\* Lyme disease surveillance transitioned to laboratory-based surveillance in 2022.

## Mosquito-borne Disease Activity

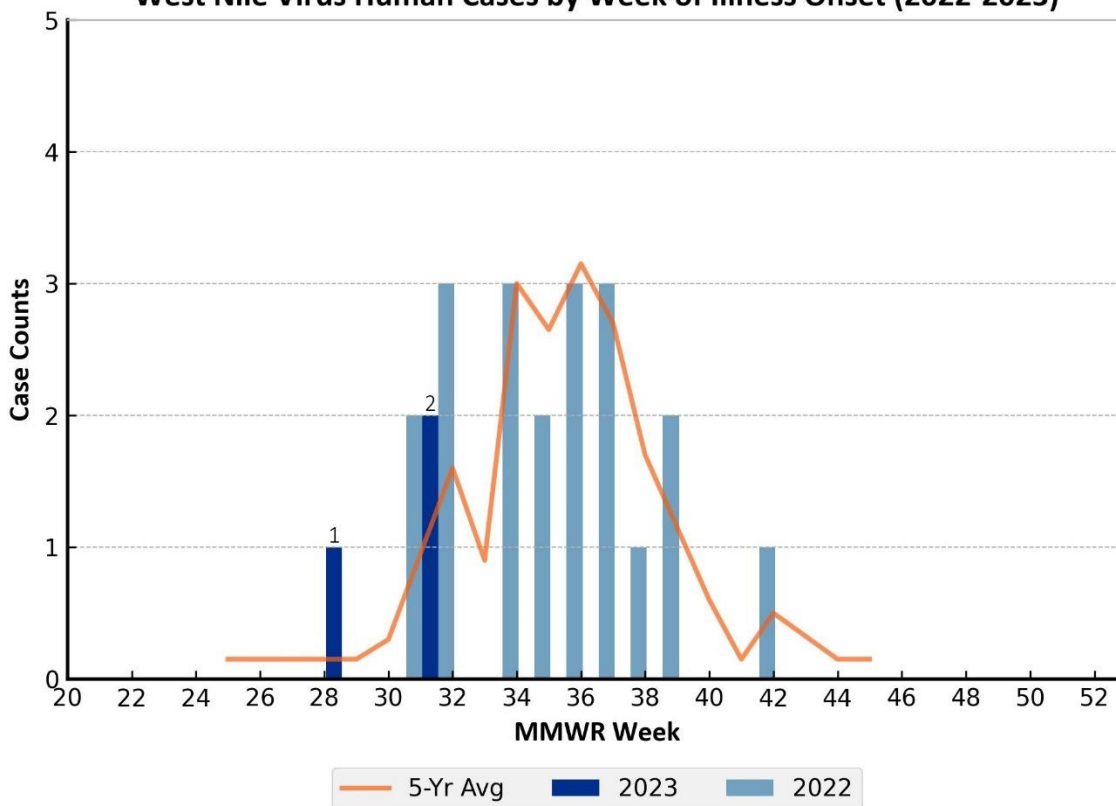
The New Jersey Department of Health Public Health and Environmental Laboratories (PHL) and the Cape May County Department of Mosquito Control Bio-safety Level 3 Laboratory (CMBSL3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.\*

\*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on August 23, 2023

### West Nile Virus

- There are three presumptive positive human WNV cases, 1 from week 28 in Camden County and 2 from week 31 in Bergen and Middlesex Counties. There have been no animal cases of WNV reported in New Jersey in 2023.
- 5,869 pools from 21 counties have been tested for WNV. 43 pools tested positive in Week 33 in 11 counties and a total of 319 mosquito pools have tested positive for WNV so far this year. The positive pools were found in: *Aedes albopictus* (4), *Aedes japonicus* (3), *Aedes triseriatus* (2), *Culex* (36), *Culex erraticus* (2), *Culex pipiens* (11), *Culex pipiens/quinquefasciatus/restuans* (10), *Culex pipiens/restuans/salinarius* (249), *Culex restuans* (1), and *Culiseta melanura* (1).
- The first WNV positive mosquito pool (*Culex pipiens/restuans/salinarius*) was detected in week 24 from Bergen County. In 2022, the first WNV positive pool was detected in Week 22 from Burlington County.

### West Nile Virus Human Cases by Week of Illness Onset (2022-2023)

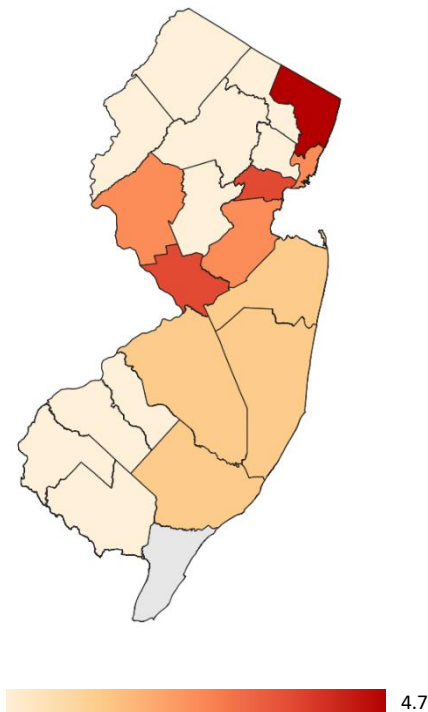


### WNV Mosquito Pool Testing

County	WEEK 33 Positive Pools		Cumulative Pos. Total* (WEEK 33)		# Pools Tested*	WEEK 33 Vector Index	
	2023	2022	2023	2022		2023 <sup>t</sup>	
Bergen	3	12	62	65	220	4.728	(↑)
Hudson	8	14	44	56	176	0.907	(↓)
Middlesex	2	6	36	34	220	0.770	(↓)
Union	4	5	20	30	128	3.271	(↑)
Mercer	10		18	19	278	2.263	(↑)
Somerset		10	17	16	180	0	(↓)
Gloucester			15	11	536	0	(↓)
Morris		2	14	15	297	0	(↓)
Burlington	3		13	17	173	0.317	(↑)
Atlantic	2	1	12	2	239	0.523	(↓)
Hunterdon	3	3	12	6	263	1.254	(↑)
Cape May	3		11		742	-	(-)
Passaic		4	10	20	162	0	(-)
Sussex			8	1	494	0	(-)
Ocean	2	1	7	6	251	0.457	(↑)
Warren		1	7	6	294	0	(-)
Camden		1	6	10	222	0	(-)
Monmouth	3	4	5	16	284	0.574	(↑)
Salem			2	1	284	0	(-)
Cumberland					253	0	(-)
Essex		1		7	173	0	(-)
<b>Total</b>	<b>43</b>	<b>65</b>	<b>319</b>	<b>335</b>	<b>5869</b>	<b>-</b>	

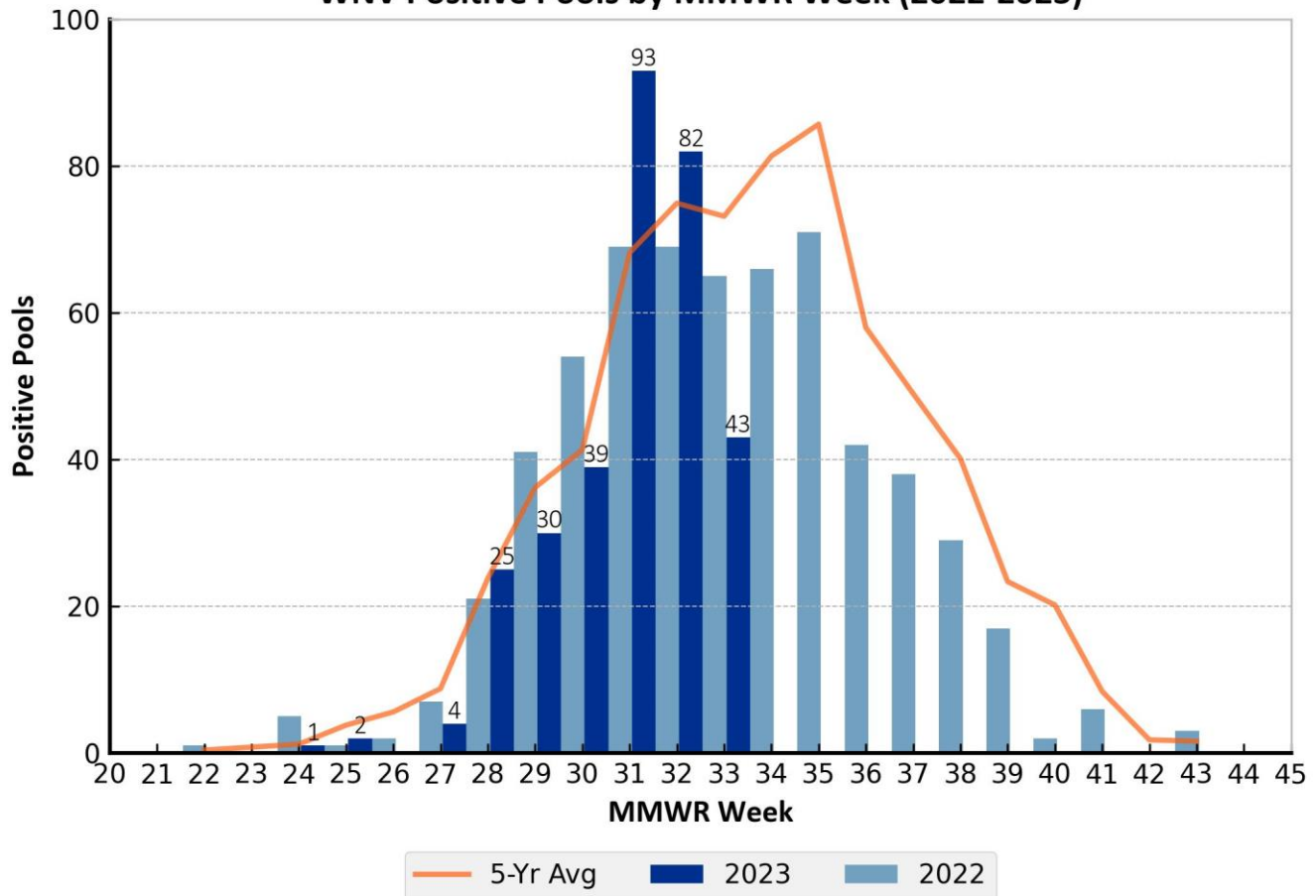
WEEK 33: Aug 14 - 20, 2022; Aug 13 - 19, 2023. \*The number of pools tested for 9 counties includes early season collections that were specifically targeting JCV: Camden (9), Cape May (15), Cumberland (13), Essex (3), Gloucester (100), Mercer (7), Morris (18), Salem (8), Sussex (92), and Warren (27).

### WNV Vector Index, WEEK 33<sup>t</sup>

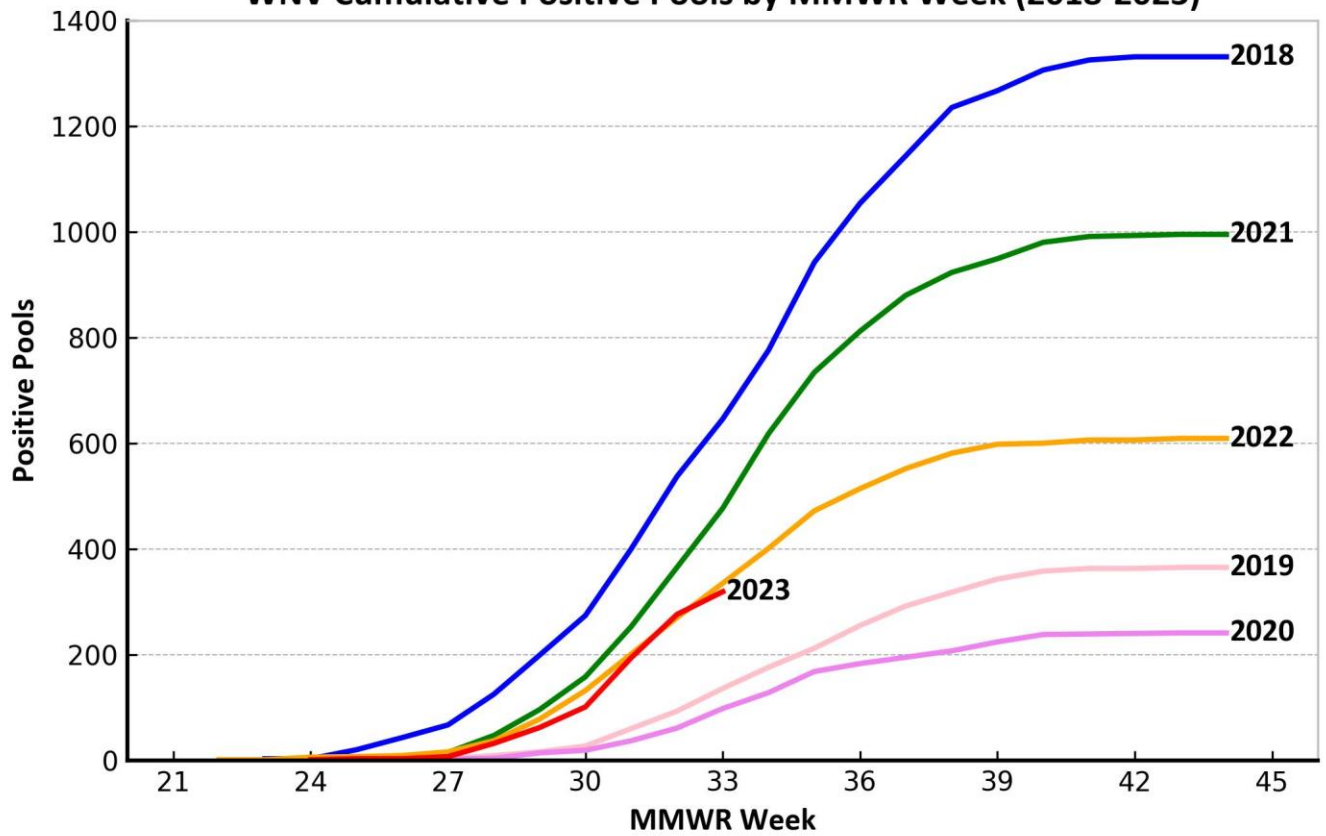


<sup>t</sup> Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps only. Cape May vector index cannot be calculated for this week.

**WNV Positive Pools by MMWR Week (2022-2023)**



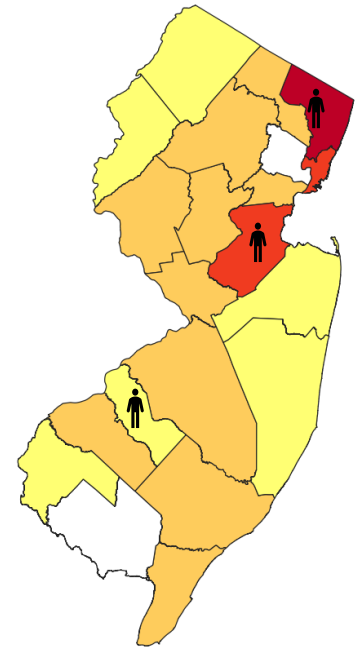
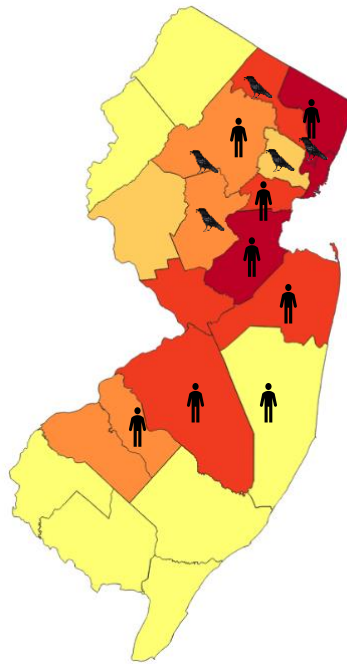
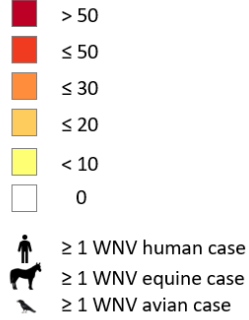
**WNV Cumulative Positive Pools by MMWR Week (2018-2023)**



### 2022 WNV Activity

### Cumulative WNV Activity, 2023

#### WNV Positive Pools



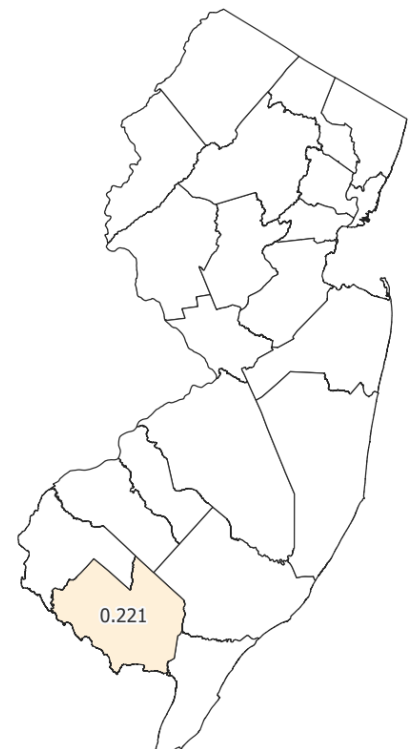
### Eastern Equine Encephalitis

- There have been no human or animal cases of EEE in New Jersey in 2023. EEE human cases were last reported in 2019 (4 cases).
- A total of 5,685 pools from 21 counties have been tested for EEE. One positive EEE pool (*Culiseta melanura*) was identified in Cumberland County in week 30. In 2022, the first EEE positive pool was detected in Week 33 from Morris County.

#### EEE Mosquito Pool Testing

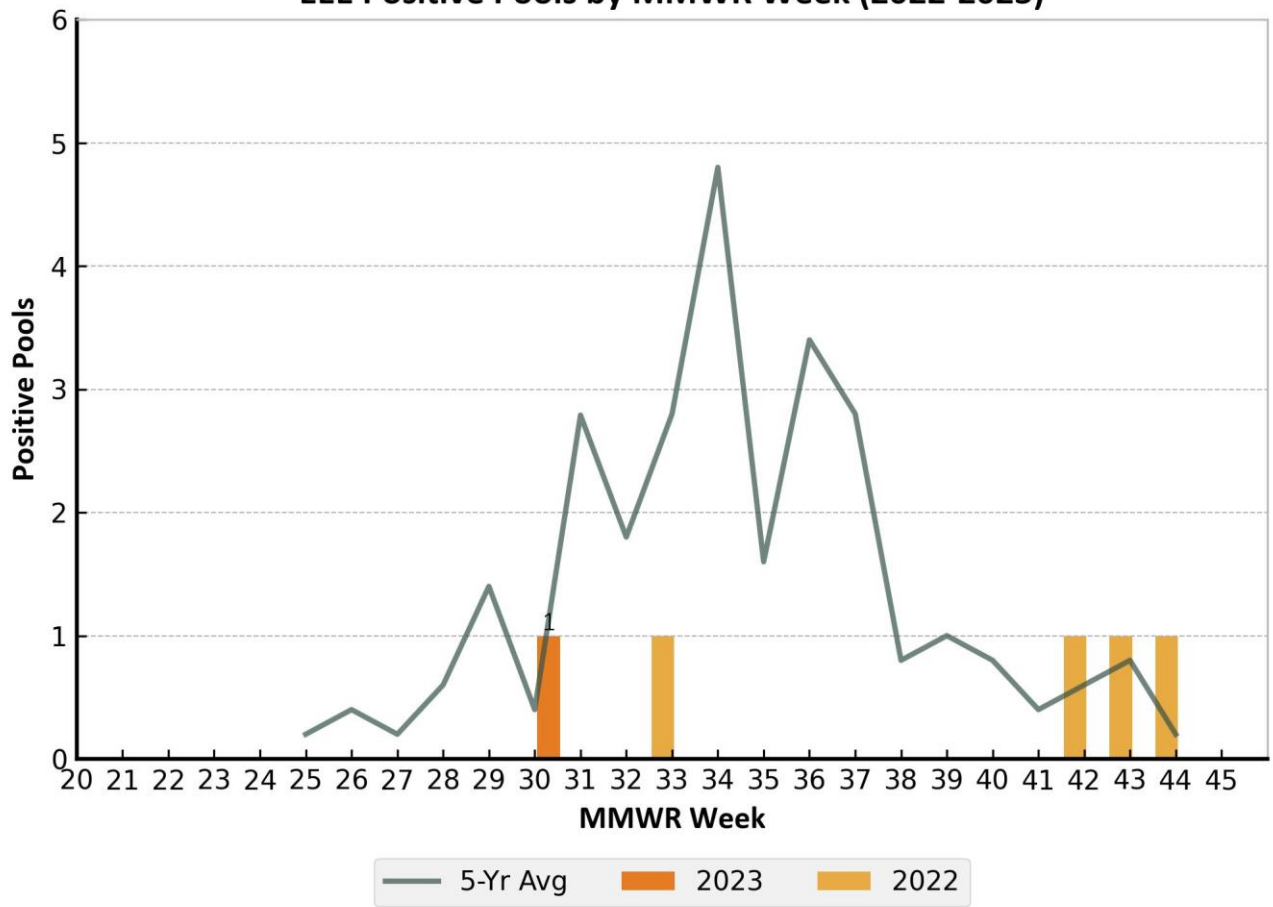
County	WEEK 33 Positive Pools		Cumulative Pos. Total* (WEEK 33)		# Pools Tested	Cumulative MFIR
	2023	2022	2023	2022		
Cumberland			1		253	0.221
Atlantic					239	
Bergen					220	
Burlington					168	
Camden					209	
Cape May					642	
Essex					173	
Gloucester					535	
Hudson					176	
Hunterdon					260	
Mercer					266	
Middlesex					220	
Monmouth					284	
Morris		1		1	297	
Ocean					246	
Passaic					162	
Salem					263	
Somerset					180	
Sussex					485	
Union					128	
Warren					279	
<b>Total</b>	-	1	1	1	<b>5685</b>	-

#### Cumulative EEE MFIR, 2023



WEEK 33: Aug 14 - 20, 2022; Aug 13 - 19, 2023 \*includes early season pools from 9 counties: Camden (9), Cape May (15), Cumberland (13), Essex (3), Gloucester (100), Mercer (7), Morris (18), Salem (8), Sussex (92), and Warren (27).

### EEE Positive Pools by MMWR Week (2022-2023)



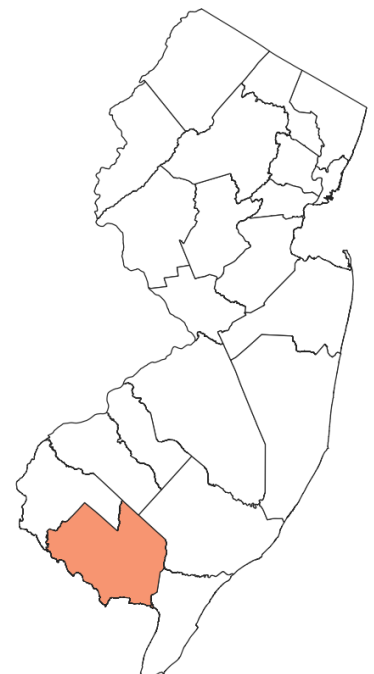
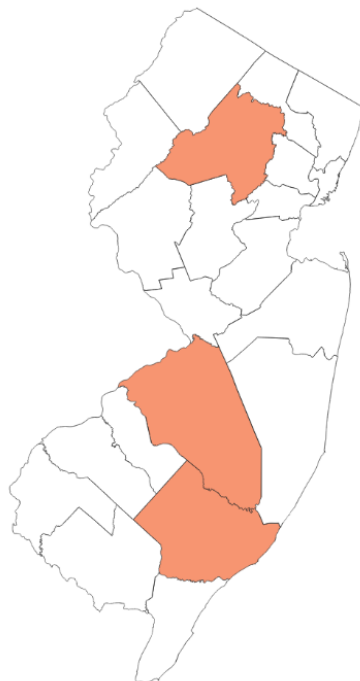
### 2022 EEE Activity

### Cumulative EEE Activity, 2023

#### EEE Positive Pools

- > 10
- ≤ 10
- ≤ 6
- ≤ 2
- No EEE activity

- Human case
- Equine case
- Alpaca case
- Deer case



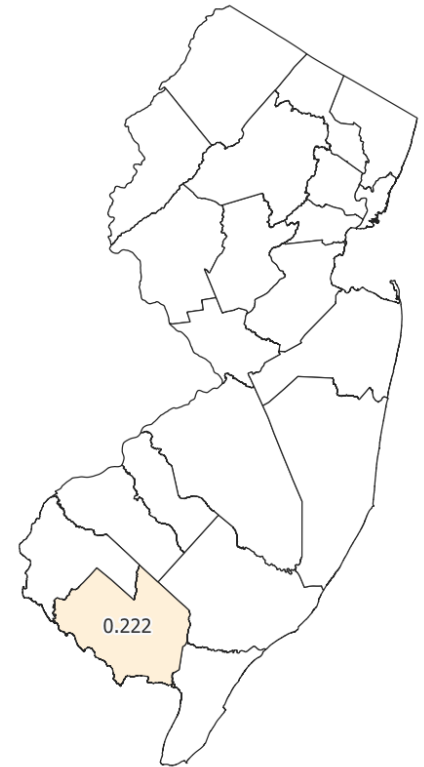
## Jamestown Canyon Virus

- There have been no human cases of JCV in New Jersey in 2023.
- 5,337 pools from 21 counties have been tested for JCV. One positive JCV mosquito pool (*Anopheles quadrimaculatus s.l.*) was identified in Cumberland County in week 25. In 2022, the first JCV positive pool was detected in Week 22 (Bergen County).
- JCV can be detected in early-season mosquitoes. Nine counties submitted early season mosquito pools for JCV testing, with collection dates starting the 1<sup>st</sup> week of April. These are Camden (9), Cape May (15), Cumberland (13), Essex (3), Gloucester (100), Mercer (7), Morris (18), Salem (8), Sussex (92), and Warren (27). None of the early-season pools was positive for JCV.

JCV Mosquito Pool Testing

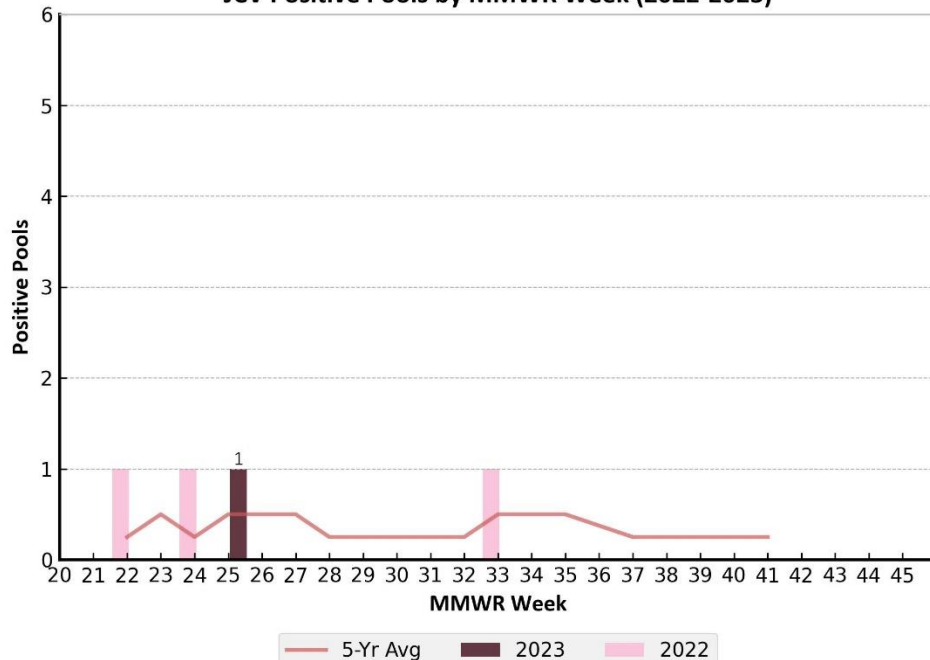
County	WEEK 33 Positive Pools		Cumulative Pos. Total* (WEEK 33)		# Pools Tested	Cumulative MFIR
	2023	2022	2023	2022	2023	2023
Cumberland			1		253	0.222
Atlantic					239	
Bergen				2	220	
Burlington					168	
Camden					197	
Cape May					308	
Essex					173	
Gloucester					534	
Hudson					176	
Hunterdon					260	
Mercer					266	
Middlesex					220	
Monmouth					284	
Morris					297	
Ocean					246	
Passaic					162	
Salem					262	
Somerset					180	
Sussex		1		1	485	
Union					128	
Warren					279	
<b>Total</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>5337</b>	<b>-</b>

Cumulative JCV MFIR, 2023



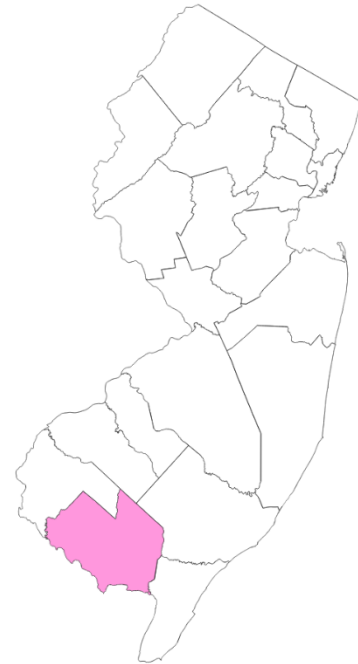
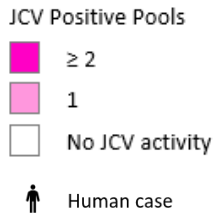
WEEK 33: Aug 14 - 20, 2022; Aug 13 - 19, 2023 \*includes early season pools from 9 counties

JCV Positive Pools by MMWR Week (2022-2023)



**2022 JCV Activity**

**Cumulative JCV Activity, 2023**



**Other Mosquito-borne Viruses**

- Mosquito pools from 21 counties have been tested for other arboviruses with no positive results.

**Cumulative 2023 Mosquito Pool Testing (Other Viruses<sup>a</sup>)**

County	SLE		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	239		4							
Bergen	220									
Burlington	168		5		2		2		2	
Camden	208		10		3		3		3	
Cape May	580		10		60				60	
Cumberland	253									
Essex	173									
Gloucester	534									
Hudson	176									
Hunterdon	260		3							
Mercer	266		12		2		2		2	
Middlesex	220									
Monmouth	284				2		2		2	
Morris	297				3		3		3	
Ocean	246		5							
Passaic	162		8							
Salem	262		18							
Somerset	180									
Sussex	485		11							
Union	128									
Warren	279		16							
<b>Total</b>	<b>5620</b>	<b>-</b>	<b>102</b>	<b>-</b>	<b>77</b>	<b>-</b>	<b>12</b>	<b>-</b>	<b>72</b>	<b>-</b>

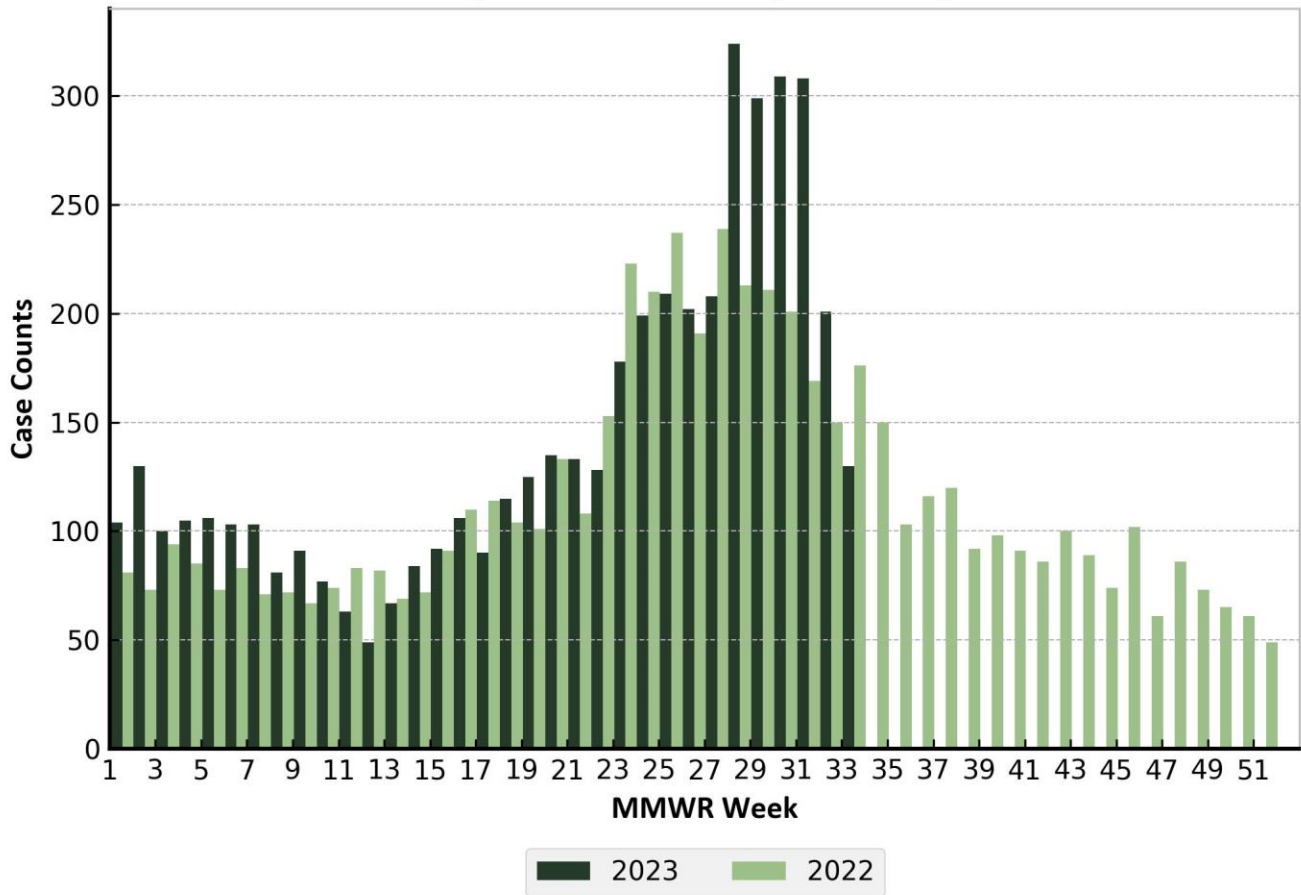
<sup>a</sup> St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)  
 Numbers in white columns represent number of pools tested to date in 2023  
 Number in blue shaded columns represent positive pools in 2023

## Tick-borne Disease Activity

### Lyme Disease

- There have been 4,896 cases of Lyme disease reported in New Jersey in 2023 in 21 counties.
- The number of cases in Week 33 continued to decline and is now lower than this week last year.

Lyme Disease Cases (2022-2023)

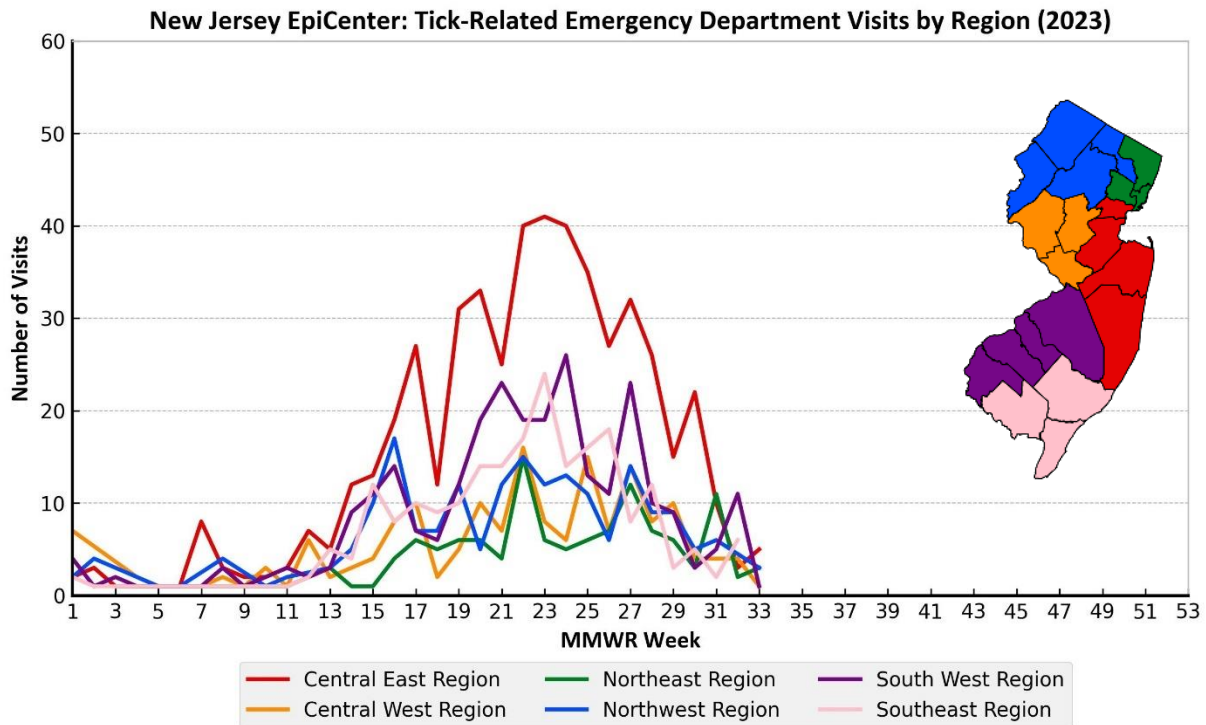
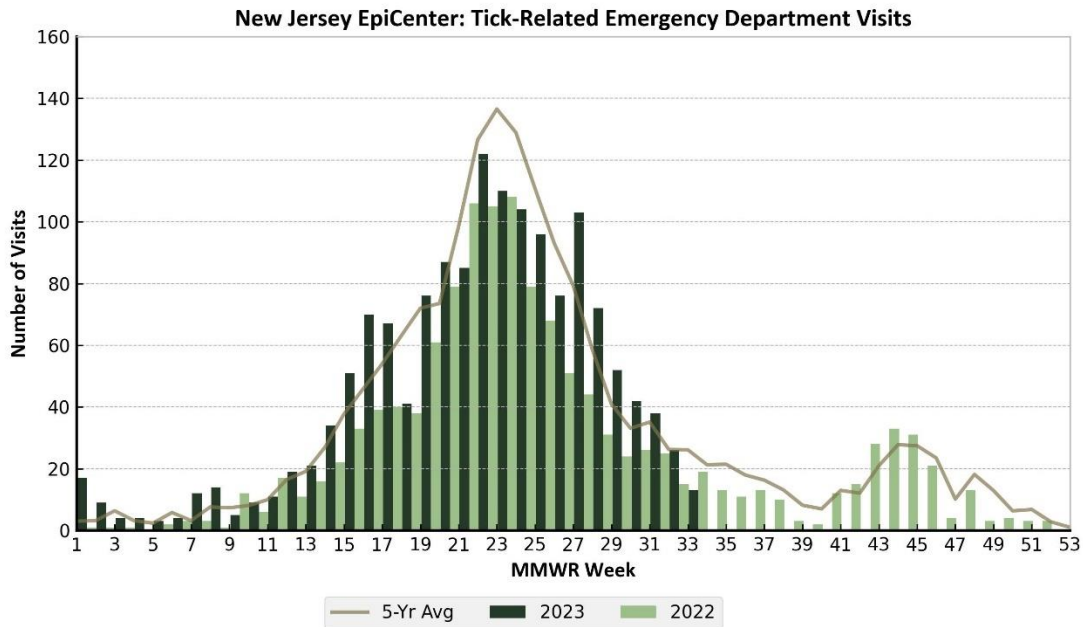


### Tick-related Emergency Department Visits

New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing ED computer systems. The chart below represents N.J. residents seen at emergency departments statewide with a tick-bite complaint or signs/symptoms associated with a reported tick-bite. Tick-related ED visits occur throughout the year with peak number of visits in the summer months and a smaller peak in the fall weeks when adult *Ixodes scapularis* (blacklegged ticks) are active.

In Week 33, the number of tick-related ED visits continued to decline. The number is comparable to 2022 and below the 5-year average.





Data reflects ED visits downloaded from EpiCenter as of August 23, 2023

#### For more information

- NJDOH Communicable Disease Service: <https://www.nj.gov/health/cd/topics/vectorborne.shtml>
- New Jersey Vector-borne Disease Dashboard: [https://dashboards.doh.nj.gov/views/public\\_dashboard/Intro](https://dashboards.doh.nj.gov/views/public_dashboard/Intro)
- New Jersey Arboviral Activity Maps: <http://bit.ly/JerseySurv>
- NJDEP Office of Mosquito Control Coordination: <https://www.nj.gov/dep/mosquito/>
- NJDA Division of Animal Health: <https://www.nj.gov/agriculture/divisions/ah/>